

REMARKS

Claim 33 has been canceled, claim 46 has been added, and claim 38 has been amended to depend from claim 37. No new matter was added. Thus, claims 13, 16-18, 20, 31, 32 and 34-46 are pending. For reasons stated herein, Applicant respectfully submits that the claims of the present application are patentable over the prior art cited by the Examiner. Accordingly, allowance of the present application is respectfully requested.

I. AMICOR PURE Exhibit RC1(a)

On page 4 of the Office Action dated May 14, 2004, the Examiner states that “the AMICOR material document is virtually unreadable as entered into the E-DAN system.”

The undersigned attorney believes that this is because the RC1(a) Exhibit has white lettering on a light blue background. Thus, the undersigned attorney has printed similar information concerning the AMICOR PURE product from the web site “www.amicor.co.uk” and encloses same with this Amendment.

Applicant submits that the printed materials in support of arguments for non-obviousness of the present invention in that the problem addressed by the present invention has long been recognized, that the problem has not been successfully solved before the present invention, and that the present invention has enjoyed immediate commercial success.

II. Claim Rejections under 35 USC §112, second paragraph

- A. In the Office Action, the Examiner rejects claims 33 and 34 under 35 USC §112, second paragraph, as being indefinite because they are “duplicative of claims 35 and 36.”

Claim 33 has been canceled.

Applicant submits that claim 34 is not “duplicative” of claim 36. Claim 34 depends directly from independent claim 13, and claim 36 depends directly from independent claim 35. Independent claims 13 and 35 are of different scope. For instance, claim 35 requires the antifungal compound to be incorporated into a “spinning dope”. Independent claim 13 does not include a “spinning dope” limitation. Thus, claim 34 is not “duplicative” of claim 36 as it does not include a “spinning dope” limitation.

For these reasons, Applicant respectfully requests reconsideration and removal of the above-stated §112, second paragraph, rejection.

- B. In the Office Action, the Examiner rejects claim 38 under 35 USC §112, second paragraph, as being indefinite because it depends from itself.

Claim 38 has been amended to depend from independent claim 37. For this reason, Applicant respectfully requests reconsideration and removal of the above-stated §112, second paragraph, rejection.

III. Claim Rejections under 35 USC §102(a)

In the Office Action, the Examiner rejects claims 13, 16-18, 20, 31-33, 35 and 37 as being anticipated under 35 USC §102(a) in view of published UK Patent Application GB 2309461 of Cox et al.

The inventor of the present application, Roland Cox, is the lead inventor of GB ‘461. The GB ‘461 Cox reference discloses fungicidal fiber produced by incorporating a fungicide into the fiber during the course of manufacturing the fiber. The disclosed fibers were specifically developed for use in making yarn for socks. The GB ‘461 Cox reference also

discloses use of the fibers in connection with athletic apparel, awnings and tents where sweat and/or rain can lead to fungal growth and odor problems.

Independent claims 13, 35 and 37 of the present application, are each directed to a method for controlling house dust mites and bedmites and each require the step of manufacturing a product in which at least one of house dust mites and bed mites typically proliferate selected from bedding, upholstered articles and floor coverings (carpets). In addition, dependent claim 18 specifically requires the product to be a bedding product.

The GB '461 reference fails to disclose a method for controlling house dust mites and bedmites, or anything with respect to controlling house dust mites or bedmites. Further, the GB '461 Cox reference fails to disclose a method step of preventing dead skin fragments from being converted into a suitable house dust and bedmite food source. (See new claim 46. No new matter was added; see pages 1 and 2 of the present application, as filed.)

In addition, the GB '461 reference fails to disclose a method step of manufacturing bedding, upholstered articles and carpets. The GB '461 Cox reference is only concerned with fungal growth and odor problems of textile articles that are subjected to great amounts of sweat and rain. For instance, the GB '461 Cox reference discloses sweat socks and athletic apparel that are subjected to great amounts of sweat and perspiration when worn by an individual and outdoor awnings and tents that are directly subjected to rain, snow and other precipitation. Fine domestic articles of bedding, upholstered articles and carpets are not subjected to great amounts of sweat and rain and are, in fact, ruined when subjected to great amounts of sweat and rain. In addition, the products that the GB '461 Cox reference does recite are clearly not products in which there is a potential mite problem. Further, there is no indication in the GB '461 Cox reference that textile articles in which mites proliferate could

usefully be made from the fibers of the GB '461 Cox reference. (For instance, see the discussion below with respect to the *Aspergillus niger* fungus.)

Further, the GB '461 Cox reference fails to disclose the specific method step of controlling fungi of at least one of the groups *Aspergillus glaucus* and *Aspergillus restrictus*, which is required to prevent dead skin fragments from being converted into a suitable house dust mite and bedmite food source. The inventors of the GB '461 reference did not contemplate using fungicidal fibers for uses where house dust mites or bedmites proliferate, and one of ordinary skill in the art would have no reason to believe that such fibers would be effective in controlling house dust mites and bedmites.

For example, the GB '461 Cox reference discloses that the fungicidal fibers are effective on *Aspergillus niger* fungus. (See pages 5 and 6 of the GB '461 reference.) However, *Aspergillus niger* fungus is not known to aid in the nourishment of house dust mites or bedmites; rather, they are known to have "an unfavourable influence on mites". (See column 3, lines 19-25, of U.S. Patent No. 4,442,091 issued Lebrun et al., which was previously cited by the Examiner.) Thus, the GB '461 reference teaches away from the present invention, since one of skill in the art would not necessarily want to aid the proliferation of mites by removing a fungus, *Aspergillus niger* fungus, that is believed to have an unfavorable influence on mites. Thus, the GB '451 reference provides no fair disclosure or suggestion of a method for preventing house dust mite and bedmite proliferation.

In fact, the Examiner himself has previously admitted that the GB '461 Cox reference does not anticipate claim 13 of the present application. To this end, in the FINAL Office Action for the present application dated April 11, 2003, the Examiner states:

"... Applicant's arguments have been persuasive, and **we agree the methods of claim 13 not anticipated by Cox, absent mite address.**"
[Emphasis added.]

Therefore, for reasons previously determined by the Examiner and for all the reasons stated above, Applicant respectfully submits that independent claims 13, 35 and 37 of the present application are not anticipated under §102(a) by the GB '461 Cox reference and that these claims and all the dependent claims of the present invention are patentable over the GB '461 Cox reference.

Applicant respectfully requests reconsideration and removal of the §102(a) rejection of claims 13, 16-18, 20, 31, 32, 35 and 37.

IV. Claim Rejection under 35 USC §103(a)

In the Office Action, the Examiner rejects claims 13, 16-18, 20 and 31-45 under 35 USC §103(a) as being obvious over published UK Patent Application GB 2309461 of Cox et al. in view of U.S. Patent No. 5,156,843 issued to Leong et al. and further in view of EP 0047553 of Lebrun et al.

The Cox patent is discussed above. The Lebrun patent, as discussed in one of Applicant's previous responses, discloses topical applications of a fungicide (natamycin) to bedding by spraying the fungicide on the exposed surfaces of the bedding after each laundering. Such treatments involve the practical difficulty of repeatedly treating bedding with such a compound subsequent to laundering.

The Leong patent is newly cited. It is concerned with intersticed material such as woven and non-woven fabrics and open-cellular materials which are impregnated with functional substances. Leong is dissatisfied with the controlled release of functional substances from intersticed materials, and therefore, discloses the use of microporous particles for holding and slowly releasing functional substances. The particles are produced by emulsion polymerization, and the functional substances are placed in the pores of the particles.

The Leong patent is largely concerned with the particles themselves and their manufacture and their impregnation with functional substances. The incorporation of the particles into the intersticed materials is not described to any significant extent, except to say that the particles are placed inside various intersticed materials as listed in column 7, lines 53-61, of the Leong patent. The listed articles are all fibrous or cellular constructions. The particles are placed in the interstices between fibers of the fibrous materials or are drawn into the pores of the open-cellular material. For example, an existing pad, cloth, sponge or the like would have particles squeezed into it or sprinkled onto it.

The Leong patent fails to disclose the method step of incorporating the particles into a manmade fiber during the course of manufacture of the manmade fiber as required by claims 13 and 37 of the present application, and fail to disclose incorporating the particles into a spinning dope and thereafter manufacturing a manmade fibre as required by claim 35 of the present application. Rather, the particles of Leong are simply retained physically within the openings in the existing intersticed material. The intersticed material plays no part in the controlled release of a functional substance; rather, the porous particles themselves provide the release mechanism. Thus, Leong's solution to retaining and releasing functional substances is entirely different from that of the present invention in which the antifungal compound is incorporated into fiber during the manufacture and formation of the fiber before the fiber is made and before an article of bedding is made from the fiber.

If one of skill in the art applied the teachings of the Leong patent to that of the GB '461 reference, the fungicide would be placed in particles that are thereafter placed into interstices of a manufactured article, such as a sock. This would not produce fibers with a fissured structure through which the fungicide could diffuse to the surface of the fiber as required by claims 34-46 of the present application. Leong's particles are already outside the

fiber surface and would solely be responsible for controlling the slow release of the fungicide, with the fiber playing no role in the release. The fiber according to the Leong patent is there simply to provide the structure of the article and to keep the particles within the structure, but outside the fibers themselves.

The U.S. Court of Appeals for the Federal Circuit in In re Dembiczak, 50 USPQ2d 1614 (Fed. Cir. 1999) clearly states that it is improper to combine “prior art references without evidence of such a suggestion, teaching, or motivation” and that such improper hindsight analysis “simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability”. In the present instance, the GB ‘461 Cox reference provides no fair disclosure of a method of mite control as previously admitted by the Examiner and provides no fair disclosure of a method step of preventing dead skin fragments from being converted into a suitable house dust mite and bedmite food source as discussed above in detail.

The Lebrun patent merely discloses the impractical repeated spraying of natamycin on bedding after each laundering. Lebrun does not disclose, suggest or teach the delivery of a fungicide that survives laundering. In fact, natamycin does not remain effective after laundering even when held in place, and its effectiveness degrades in light. (See the previously filed Declarations of Roland Cox.)

The Leong patent discloses the use of particles that are placed between fibers of pre-manufactured fibrous articles. Thus, the Leong patent also does not teach the means of delivering an antifungal substance as required by the claims of the present application.

Thus, there is no evidence in any of the cited prior art of a suggestion, teaching, or motivation for the combination asserted by the Examiner in the Office Action.

In addition, the previously submitted Declarations of Rolland Cox support the non-obviousness of the present invention in that the problem addressed by the present invention has long been recognized (see Lebrun), the problem has not been successfully solved before the present invention (see the Declaration of Rolland Cox), and the present invention has enjoyed immediate commercial success (see the Declaration of Rolland Cox).

For all of the above stated reasons, Applicant respectfully submits that independent claims 13, 35 and 37, and all claims dependent therefrom are non-obvious and patentable over the GB '461, Leong and Lebrun references.

Applicant respectfully requests reconsideration and removal of the §103(a) rejection.

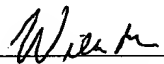
V. Conclusion

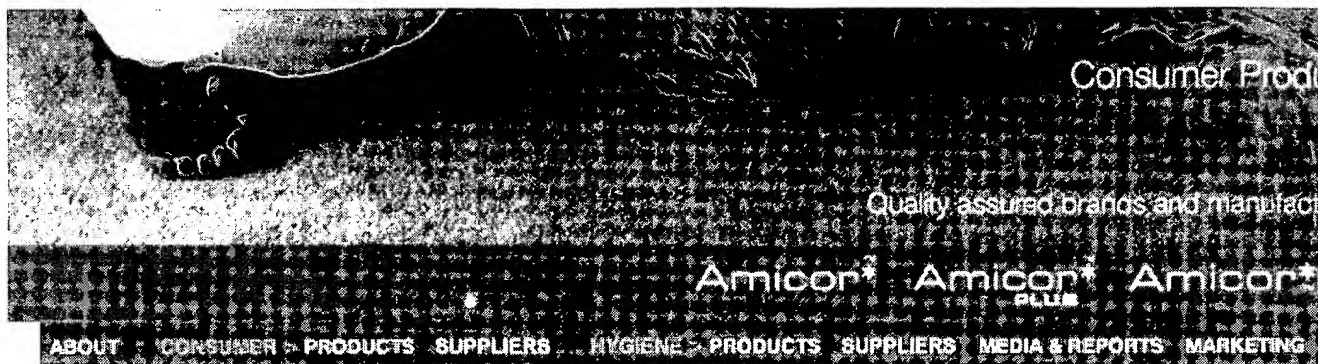
Applicant has made a significant advance in the development of bedding and like domestic articles that are capable of providing improved conditions for allergy and asthma sufferers by preventing the colonization and proliferation of house dust mites and bedmites therein. His invention is meritorious.

In view of the above amendments and remarks, Applicant respectfully submits that the rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment
to our deposit account no. 08-3040.

Respectfully submitted,
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Beds & Bedding
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Furnishings & Carpets
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Socks & Footwear
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Clothing and Sportswear
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Pet Care
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Beds & Bedding

Amicor Pure provides a healthy sanctuary from allergens night after night.

Gentle and effective, Amicor Pure bedding products have been designed scientifically to create a better sleeping environment for those with house dust mite allergy..... and for those who look after their own health and their childrens'.

This page is to explain how Amicor Pure works, how we have tested the product and the endorsements that we have received. A full list of manufacturers and brands can be found in the 'Suppliers' section.

Amicor Pure - the healthy sleeping environment

Amicor Pure blends beautifully inside **pillows, quilts, mattress protectors, blankets, bedlinen and covers, mattresses, beds, filling and ticking.**

How does Amicor Pure prevent allergens in bedding?

While we sleep we shed skin flakes into the bed. Because it is warm and humid for the time that we sleep, this provides the ideal environment for the fungi, aspergillus repens, to take hold of these skin flakes and turn them into a nutritious form for the dust mite. By preventing the growth of the fungi, the skin flakes remain too dry for the dust mite to eat and simply turn to dust. As the food source is not there, the mites cannot live and breed inside bedding. Amicor Pure does not affect the mites at all, it is not a harmful pesticide and does not kill.

Amicor Pure's preventative effect will last through repeated washing and use. In fact, it will last as long as the normal lifetime of the product.

For the illustrated story on the mites' life cycle in beds please click on 'life cycle' on the right hand column.

Who is Amicor Pure for?



The Fiber



The L



Immune Dia



Red Endor



Allergy L App

Our modern homes with central heating, en-suite bathrooms and double glazing are thought to be encouraging the mite population in our homes. The modern, luxury home that we live in could actually be harming our health!

Babies of six months

Babies are particularly vulnerable to dust mite allergens at the age of six months because this is the point where the immune system that they inherited from their mother is at its' lowest, before thier own immune system begins to develop fully.

Doctors consider this to be one stage where babies are vulnerable to the house dust mite allergen and could become sensitised. After six months, there could easily be enough mites inside a baby mattress to cause sensitivity. Amicor Pure prevents allergens at source and will provide a safe place for babies to sleep during this sensitive time.



Pillows



Beds & Mattresses

Children

1 in 5 children (in the UK) are now diagnosed with asthma or allergic rhinitis. The causes of this are becoming more complex and there is no single cause.

The house dust mite is thought to affect 80% of sufferers so is still considered to be the major cause of indoor allergies. Pets and smoking make the situation worse. After six months, the average child's bed will harbour a colony of mites producing an amount of air bourne allergens that is way above World Health Organisation recommendations. Amicor Pure provides a healthier sleeping environment that takes away this risk by preventing allergens and provides peace of mind at night time.

Adults

Recent statistics indicate that adults are now becoming sensitised at any age - so asthma is not just a problem for children, but for people of all ages.

Allergen sufferers

For those who are already sensitised, Amicor Pure will significantly reduce exposure to house dust mite allergens while you sleep. Unfortunately, Amicor Pure will not provide protection from outdoor allergens such as pollen or polution, but it will provide a healthy sanctuary from allergens night after night.

If you adopt the whole Amicor Pure healthy sleep environment

Three levels of Scientific Research

There are many bedding fibres and finishes that claim to prevent the house dust mite. We believe that Amicor Pure is the leading product and have invested in a continuous reseach programme to provide scientific evidence for our product claims. This is a

summary of the research so far.

1 Prevention of fungi and dust mites

We commissioned research with Cambridge Entymology into the effectiveness of Amicor Pure in commercial blends and their effectiveness at controlling the growth of dust mites compared with normal bedding without Amicor Pure. This study is a replica of what happens in real life and in a typical home. It is the anti-fungal additive inside Amicor Pure that is effective against the growth of mites nad that is what we put to the test here.

2 Prevention of allergens

Cambridge Entymology then went on to measure air borne allergens with and without Amicor Pure, as this is the real measure of how effective Amicor Pure is at providing a healthier sleep environment. The World Health Organisation have issues guidelines into the levels of air borne allergens that will 1. cause sensitisation and 2. trigger an asthma attack. Amicor Pure keeps allergens to well below both of these levels.

3 Clinical trials - Prevention of allergens reduces symptoms and increases wellbeing

The first two clinical trials were carried out by two allerology specialists at the Red Cross Hospital in Barcelona. These trials prove three things. Firstly, that after a three week period 48 of the 50 patients began to feel an improvement in their every day symptoms. Secondly, that by monitoring each patients' health the doctors felt able to reduce the medication prescribed to these patients. Thirdly, that Amicor Pure bedding is still effective after eighteen months and that the health improvements shown were not simply because patients had new bedding. Those patients with placebo bedding not containing Amicor Pure did not show the same health improvements during the trial period.

Additional Benefits - the doctors also reported that their patients were very happy about the softness and comfort of Amicor Pure bedding which made a change from the crackly and noisy bedding they had often used before.

Further clinical trials are underway with National Pollen Research at Southampton University into the effect of Amicor Pure bedding with allergen sufferers. This is a duoble blind study. The results are due to be published at the end of 2005.

Copies of our research reports are available on request.

Please note: Amicor Pure is not a medication and will not cure - it is a complementary product designed to support the healthcare regime presribed by your doctor. It simply provides an allergen-controlled environment to sleep in. Please always follow the individual advice given to you by your doctor.

Consumer Information

What does Amicor Pure feel like?

Amicor Pure is the fibre that goes inside your bedding. It is blended in with all the normal materials. It is a fibre, that is soft and bouncy inside pillows and quilts... and feels smooth to the touch for blankets and bedlinen.

Gentle, safe and soft

Amicor Pure has been tested for skin safety in a trial that compared it alongside polyester and 100% cotton. Amicor Pure actually measured 'less of an irritant than the 100% cotton'. Doctors agree, sleeping in an environment that prevents allergens at source will help to prevent sensitisation for people of all ages and provide an enhanced sleep environment for those who already suffer.

Does Amicor Pure wear out?

Amicor Pure's effect in beds and bedding will last for up to 200 washes. You are more likely to replace bedding items before the effect has been washed out. In many cases, Amicor Pure products can be washed to keep them clean and fresh. Please see the care label on the products that you choose.

Consumer Endorsements

Don't just take our word for it. We have sought independent approval for Amicor Pure products to give consumer assurance in the quality of the brand.

Allergy UK 'Seal of Approval', Red Cross Hospital, Barcelona, Oekotex 'White list' accreditation.

Please click on the pop-ups on the right to see the endorsements

Recommended Web Sites

The **British Allergy Foundation** offer information and advice to consumers and healthcare professionals into all areas of allergy. On this site you can also find other companies with the 'Seal of Approval' for consumer products. Allergy UK is a charity that raises funds for research, healthcare training and provides a consumer help line that is staffed by allergy and asthma experts. Go to www.allergyuk.com

The **National Asthma Campaign** provides excellent information on the subject of asthma, with good advice for consumers. Go to www.asthmauk.org

Oekotex is the leading independent testing and certification programme for ecological textiles. Based in Germany, many reputable testing houses carry out their tests to ensure the ecological status of individual products. Well known by the textile industry, the Oekotex label will become more and more important for consumers looking for safe products to buy. Go to www.oekotex.com

Contact Us

For further information on Amicor Pure please contact Amicor Marketing. Email: caroline.powell@acordis.com

Disclaimer: Amicor Pure Products

Protection from the incorporated anti-microbial preservative is provided for the fibre and fabric only. Amicor Pure products do not protect the users or others against bacteria, viruses, germs or other disease organisms. Skin testing is considered to be for the general public.

The Fibre Diagram

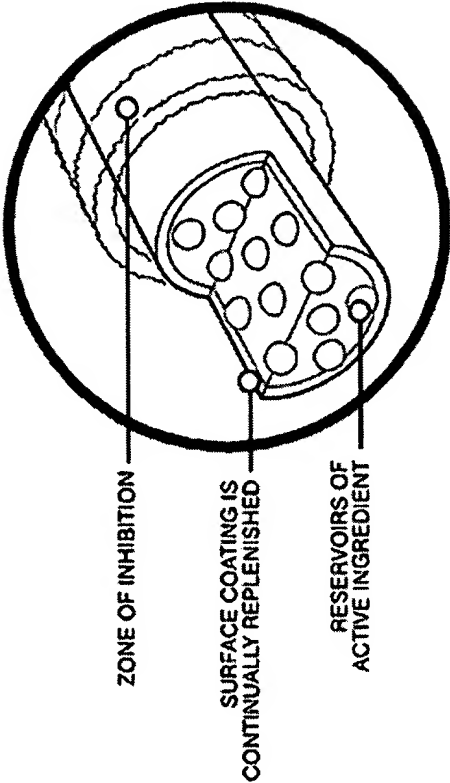


>. The Fibre Diagram

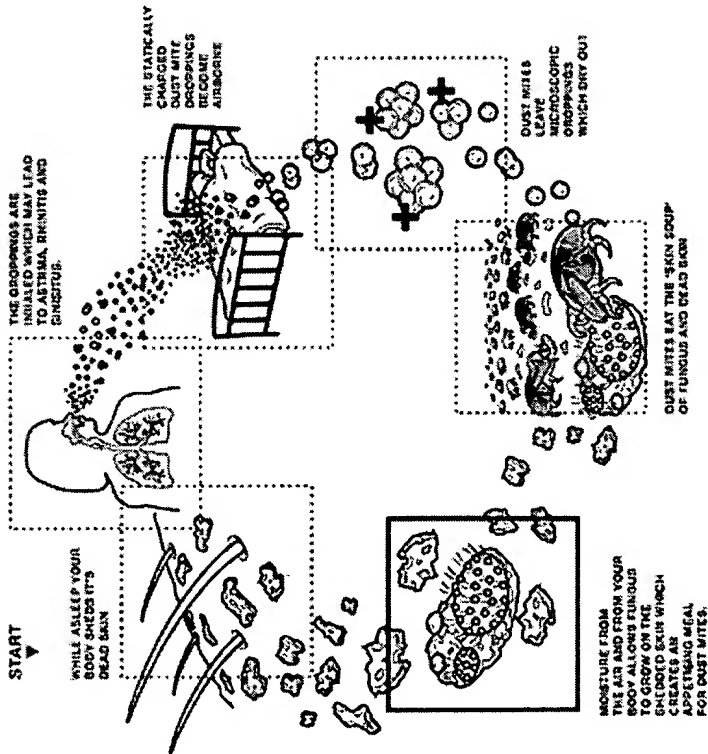
Amicor fibres are produced using our unique 'late injection technology'. This means that the effective ingredients are dispersed inside the fibre, and are not a fragile surface finish.

The fibre itself creates a 'slow diffusion' so that just enough of the active ingredient arrives at the surface. The fibre is self-replenishing and is durable throughout washing and wear.

In fact Amicor's effect will last for at least 200 washes.



The Lifecycle



> The Lifecycle

This is how Amicor Pure prevents allergens and dust mites in your bed. Start at the top left and read through the cycle to see how safe, gentle and preventative Amicor Pure really is.

This version is not suitable for reproduction in the USA.

Please contact Amicor Marketing or one of our licencees for the USA version.

This diagram and the life cycle is the xxxxxx property and copyright of Acordis UK Ltd.